**SOFTWARE RELEASE NOTICE**

**SYSTEM: Automated Tracking Station (ATS)**                    **RELEASE: 2.2**

**DATE:  April 22, 1999**

**MODIFICATION DESCRIPTION:**

All work was requested through Request-for-Support (RFS) #99-010.  Copies of these requests can be obtained from NASA Code 584/CSC task leader Susannah A. Warner (757-824-2496).  The changes made to the ATS source code will be archived on compact disc and sent to Scientific-Atlanta for control under Microsoft Visual Source Safe.

This software release is an upgrade to ATS 2.1.1.  It repairs several problems reported in testing at one or all ground stations and/or in N-161 software lab testing, WOTIS scheduling engineer Debbie Dukes and with QuikSCAT engineer Alain Jouchoux.  These include:

**C:\Master\11mInterface.exe:**
   (1) <u>Enhancement</u>: Reports S-band combiner instrument status to MonitorAndControl in order to provide more status to QuikSCAT via StationStatusBroadcaster process.   Module affected includes *Read11mMessage.cpp.*

**C:\Master\MonitorAndControl.exe:**
   (1) <u>Enhancement</u>: The status monitoring thread sends SCC S-band combiner status for QuikSCAT. Module affected includes *StationStatusMonitor.cpp.*
   (2) <u>Fix</u>: The status monitoring thread exits normally after takedown. Module affected includes *StationStatusMonitor.cpp.*
   (3) <u>Fix</u>: The status monitoring thread sends SCC S-band receiver LHC, RHC tracking and data status correctly.  Module affected includes *StationStatusMonitor.cpp.*

**C:\Master\StationStatusDisplay.exe:**
   (1) <u>Fix</u>: Capability to view all status from WGS, AGS, SGS and MGS.  Modules affected include *ReadMGSstatus..cpp*, *ReadWGSstatus.cpp*, *ReadAGSstatus.cpp* and *ReadSGSstatus.cpp.*

**C:\Master\StationStatusBroadcaster.exe:**
    (1)  <u>Fix</u>: Removed numerous debug file writes. Module affected includes *StationStatusBroadcast.cpp.*

**C:\Master\ShippingReport.exe:**
   (1) <u>Fix</u>: This utility automatically formats ground station name and recorder type when operator selects tape name from listbox.  Modules affected include *ShippingReportDlg.cpp* and *ShippingReportDlg.h.*

**C:\Master\WOTISInterface.exe:**
   (1) <u>Fix</u>: A change integrated in ATS 2.1.1 to delete all daily schedule files when a new wotrs.mas is received from WOTIS is no longer supported.  The ATS 2.1.1 change was made to accommodate a WOTIS event-deletion scheduling procedure, but has prohibited the normal processing of  files during delivery of daily schedules from the Landsat7 project.   WOTIS scheduling has been advised of the operational procedure required for event deletions expected to be processed normally by ATS (see **KNOWN BUGS OR LIMITATIONS**, below).   Module affected includes *SaveDaily.cpp.*

**C:\Master\OpTsWffTdf.dll** and **c:\Node\OpTsWffTdf.dll:**
   (1) <u>Fix</u>: One function in this Tracking Data Formatter (TDF) library was changed to report five significant decimal figures in the uplink frequency value.  This value is written to the log file on the node and is used for UTDF file processing;  ATS 2.1.1 previously reported four figures.  The

uplink frequency required for Landsat7 supports is 2106.40625.  The value 2106.4063 was reported using ATS 2.1.1.  Module affected includes *WcOpTsDevMgrWffTdfCtrl.cpp*.


## FILES AFFECTED:

Six ATS applications (*.exe) and their associated help text (*.txt) files have been changed.  One ATS dynamic link library  has also been modified..

Device status logging text files and operator-created profiles are never affected.  See **Attachment 1: ATS 2.2 FILES AND FOLDERS**.

## HARDWARE REQUIREMENTS

**(no changes)**

- Minimum Pentium-200 MHz for Master and Nodes.
- Minimum 64 megabytes RAM
- Windows NT 4.0 (service pack 3)
- Devices connected to Node PCs via RS-232 port (and, in some cases an IEEE converter) on a Digibox.  A Hewlett-Packard workstation (HP-UX 10.2) functions as an 11meter antenna control console.

## VALIDATION PROCEDURES:

The ATS software team has completed limited testing of the software changes in the WFF N-161 lab.  Full operational testing, however, is  recommended at NASA/WFF/WGS for a three (3) day period beginning April 21, 1999 on the spare master PC, *wgsmaster1*.  This operational testing will be scheduled through WOTIS scheduling engineer Debbie Dukes (x2186).  Installation of ATS 2.2 on *wgsmaster2* and at AGS and SGS is expected prior to Friday 2000Z, April 23, 1999.  MGS will be upgraded at their operations convenience.

## KNOWN BUGS OR LIMITATIONS:

 ATS 2.2 can experience a problem when processing updates to the WOTIS-delivered schedule, wotrs.mas, that covers a multi-day period.  The situation can occur when a subsequent edit of this schedule by WOTIS engineers removes *all* events from a particular day and is re-transmitted.  In this case, ATS does not clear those events from memory and display, and continues to support them through automation.   WOTIS scheduling engineers are requested to include any type of test support for those days when they are forced to remove all previously-scheduled events.   In the event that the scheduling procedure is violated, ground station operations personnel maintain the capability to manually delete the rogue supports.
 ATS 2.1.1 resolved this problem .  It  prohibited, however,  normal processing and display of  a multi-day schedule during the typical daily one-day file updates and delivery to the Master from the Landsat7 project office.
 **ATS has a problem in distinguishing intentional deletes by the WOTIS scheduling office from one-day file updates  in the wotrs.mas  file**. ATS will accommodate both cases when WOTIS scheduling and software personnel can agree on correct design.


## INSTALLATION PROCEDURE:

Installation of this release will be conducted with a disk copy of the files (see **Files Affected** above) to the Wallops Ground Station (WGS).  Installation will take no more than one hour.  Installation of the software to the Alaska Ground Station (AGS) and Svalbard Ground Station (SGS) will be by remote copy and will follow on Friday April 23, 1999 after additional validation through operational testing at WGS. The remote

installation will require a maximum of  one hour and will be scheduled through the WOTIS scheduling office.

**DOCUMENTATION AFFECTED:**

The " Automated Tracking Station User's Manual" is available on the internet at
http://www.wff.nasa.gov/~code584/awots.html.


**COMMENTS:**

Points of contact for ATS release 2.2 are David L. Davis/NASA (757-824-1444) and
 Jeffrey L. Dorman/CSC (757-824-2300).


**APPROVAL:**

The software modifications described in this release notice has been validated and accepted.


_____      _____
NASA EPGS Project Manager                                                    Date


_____      _____
NASA AWOTS/WGS Project Manager                                          Date


SOFTWARE RELEASED:

The software modifications described in this release notice has been completed and released to ground
station operations.


_____      _____
System Manager                                                               Date


_____      _____
NASA Program Monitor                                                         Date

## ATS 2.2 FILES AND FOLDERS

**FILES ON ALL MASTERS:**
Directory of C:\Master

```
11mInterface.exe
11mInterface.txt
MonitorAndControl.exe
MonitorAndControl.txt
WOTISInterface.exe
WOTISInterface.exe
StationStatusBroadcaster.exe
StationStatusBroadcaster.txt
ShippingReport.exe
StationStatusDisplay.exe (available for LandSAT-7)
OpTsWffTdf.dll
```

**FILES ON ALL NODES:**
Directory of C:\Node

```
OpTsWffTdf.dll
```